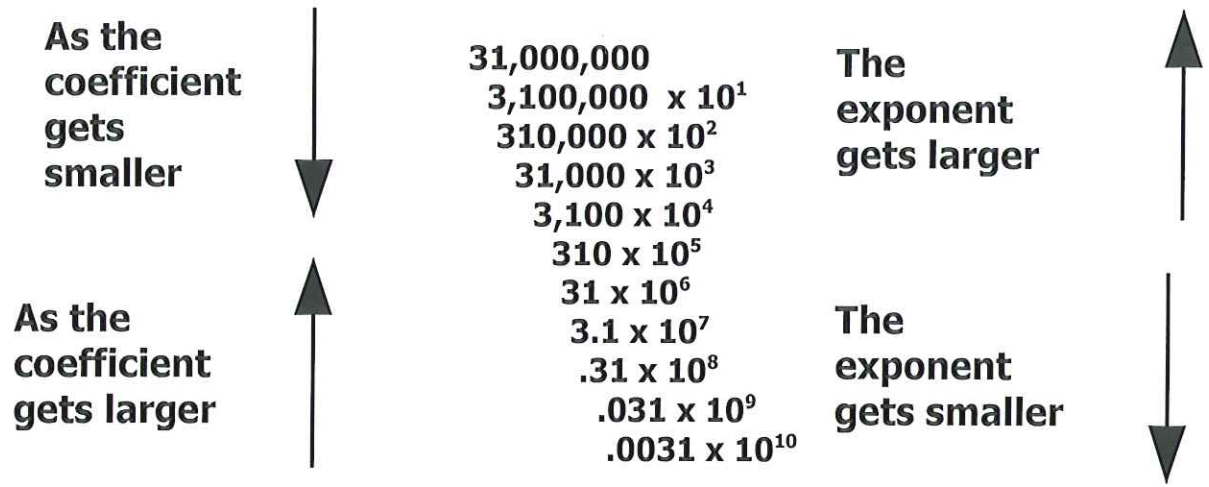


## Scientific Notation Guide & Notes



1.  $4.6 \times 10^9 + 5.1 \times 10^7$

$4.6 \times 10^9 + .051 \times 10^9$

$$\begin{array}{r} 4.6 \\ + .051 \\ \hline 4.651 \end{array}$$

#1 answer:  $4.651 \times 10^9$

2.  $6.5 \times 10^{13} - 2.2 \times 10^{11}$

$6.5 \times 10^{13} - .022 \times 10^{13}$

$$\begin{array}{r} 491 \\ 6.500 \\ - .022 \\ \hline 6.478 \end{array}$$

#2 answer:  $6.478 \times 10^{13}$

3.  $(7.3 \times 10^8)(3.1 \times 10^5)$

$(7.3 \cdot 3.1) \cdot (10^8 \times 10^5)$

$22.63 \cdot 10^{8+5}$

$22.63 \cdot 10^{13}$

$$\begin{array}{r} 7.3 \\ \times 3.1 \\ \hline 73 \\ 2190 \\ \hline 22.63 \end{array}$$

#3 answer:  $2.263 \times 10^{14}$

4.  $\frac{3.72 \times 10^{97}}{1.24 \times 10^{82}}$

$\frac{3.72}{1.24} \cdot \frac{10^{97}}{10^{82}}$

$\downarrow 3 \cdot 10^{97-82}$

#4 answer:  $3 \times 10^{15}$